

PENNSYLVANIA RAILROAD, 25th STREET ELEVATED  
Pennsylvania Historic Railroad Bridges Recording Project  
Abova S. Twenty-fifth St., from Passayunk Ave. to Washington Ave.  
Philadelphia  
Philadelphia County  
Pennsylvania

HAER No. PA-549

HAER  
PA  
51-PHILA,  
721-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
National Park Service  
1849 C Street, NW  
Washington, DC 20240

**HISTORIC AMERICAN ENGINEERING RECORD**

**PENNSYLVANIA RAILROAD, 25th STREET ELEVATED**

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**Location:** Above S. Twenty-Fifth St., from Washington Ave. to Passayunk Ave., Philadelphia, Philadelphia County, Pennsylvania.

**USGS Quadrangle:** Philadelphia, Pennsylvania-New Jersey (7.5-minute series).

**UTM Coordinates:** 18/483935/4419530

**Dates of Construction:** 1926-28.

**Basis for Dating:** Construction contracts.

**Designer:** Alexander C. Shand (Chief Engineer, Pennsylvania Railroad), in collaboration with the Philadelphia Department of Public Works.

**Fabricator:** Bethlehem Steel Co.

**Builder:** Sinclair & Grigg.

**Present Owner:** CSX Transportation.

**Present Use:** Railroad bridge.

**Structure Type:** Concrete-encased steel deck girder.

**Significance:** This elevated urban freight railroad is unusual for its great length and alignment directly over a city street.

**Historian:** Justin M. Spivey, April 2001.

**Project Information:** The Historic American Engineering Record (HAER) conducted the Pennsylvania Historic Railroad Bridges Recording Project during 1999 and 2000, under the direction of Eric N. DeLony, Chief. The project was supported by the Consolidated Rail Corporation (Conrail) and a grant from the Pennsylvania Historical and Museum Commission (PHMC). Justin M. Spivey, HAER engineer, researched and wrote the final reports. Preston M. Thayer, historian, Fredericksburg, Virginia, conducted preliminary research under contract. Jet Lowe, HAER photographer, and

Joseph E. B. Elliott, contract photographer, Sellersville, Pennsylvania, produced large-format photographs.

### Description and History

In 1862, the Pennsylvania Railroad (PRR) completed its Delaware Extension in Philadelphia, connecting its main line on the west side of the Schuylkill River with the Delaware River riverfront.<sup>1</sup> The extension crossed the Schuylkill on the Arsenal Bridge to join the Philadelphia, Wilmington & Baltimore Railroad tracks on Washington Avenue, crossing the peninsula between the two rivers. A southward branch from this line along 25th Street served industry in South Philadelphia, terminals at Girard Point, and the Philadelphia Navy Yard; another branch along Packer Avenue served coal terminals. The Baltimore & Ohio Railroad (B&O), a competing line, also built freight spurs across the peninsula.

Although the PRR and B&O tracks contributed much to industrial development, Philadelphia officials came to consider them an obstacle to expansion of the city's commercial and residential core. Railroad facilities were an early target of the City Beautiful movement, an unprecedented era of municipal improvement inspired by the 1894 World's Columbian Exposition in Chicago. Both Chicago and Philadelphia had disorganized networks of railroad tracks and terminals south of their central business districts, which civic leaders wanted to consolidate and rationalize.<sup>2</sup> Demands for eliminating grade crossings in South Philadelphia emerged in 1898, but failed to produce results. In 1910, the Philadelphia Department of Public Works unified various track elevation proposals into plans for a shared belt line along the waterfront, but the idea languished for lack of funding.

A 1913 revival of the belt line resulted in limited construction, but even as work progressed two years later, *Engineering Record* reported that "comparatively few of the details have as yet been worked out."<sup>3</sup> The City Council passed an ordinance in February 1914, authorizing payment of 60 percent of property acquisition costs and 50 percent of construction costs for the project. In an agreement published the following month, railroad officials accepted the route and funding of the proposed belt line.<sup>4</sup> The city's Department of Public Works set up a South Philadelphia Track Elevation office to supervise the project. Construction began on the south leg of the loop, with a bridge over Broad Street completed before World War I intervened. Contractor Edwin V. Hare had begun relocating utilities for the west leg of the loop, which at that time was supposed to run along 25th Street between Washington and Point Breeze avenues, turn west along Point Breeze to 29th Street, and continue south along 29th to Magazine Lane. Minutes of meetings between Department of Public Works and railroad officials reveal that while the city preferred a route entirely along 25th Street, the B&O wanted it along 29th.<sup>5</sup>

The 29th Street plan died during the war-related hiatus. Citing rising prices for labor and materials, the Department of Public Works halted construction on the west leg in February 1918.<sup>6</sup> Nonetheless, city and railroad officials continued to refine plans for the structure. Complaints from the Atlantic Refining Company and other industries near 29th Street led them to explore an all-25th Street route for the west leg. From late 1920 to mid-1921, PRR's engineering

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department revised plans and estimates.<sup>7</sup> In the new scheme, tracks would run above 25th Street the entire way from Washington Avenue to Passayunk Avenue, with a ramp descending to Oregon Avenue. The change was not codified, however, until the City Council passed an ordinance amending the track elevation agreement in December 1924.<sup>8</sup> It was not until 10 June 1926, however, that Sinclair & Grigg were awarded the contract to begin construction on the 25th Street Elevated. The projected duration of the project was two years, but work dragged on until November 1928. More than a year later, the last few industrial sidings were connected to the new elevated structure.<sup>9</sup>

The 25th Street Elevated consists of concrete piers with stylized Doric capitals supporting heavy longitudinal concrete-encased steel girders. The piers occur in two parallel lines, dividing the street into three roadways. Additional lines of piers at the sidewalk line support diverging spurs, some of which have since been removed. PRR structural drawings reveal that the columns, which taper from 3'-3" in diameter at the base to 3'-1" below the capital, contain built-up steel H-sections. The columns are about 16'-6" high from the street level to the bottom of the superstructure. Over each line of columns is a row of three 4'-4"-deep plate girders, also encased in concrete. True reinforced concrete floor beams, 3'-6" deep, span between the girders, and also extend outward to form corbel brackets supporting a paneled concrete railing.<sup>10</sup> Detailing in an Art Deco mode indicates a concern for the structure's appearance, which is consistent with structures designed by the Philadelphia Department of Public Works during the early twentieth century. PRR records document city involvement in early stages of design, and this relationship seems to have continued when work resumed after the war.<sup>11</sup>

Although the 25th Street Elevated stood complete at the close of the 1920s, it was but one component in the larger South Philadelphia Track Elevation project. Because of World War I and other reasons, work had proceeded much slower than planned. The City Council extended the deadline for completion in 1925, and again in 1929, only to have the project stalled again by the Great Depression. In 1935, PRR officials reported that \$20.7 million of work, including track elevation along Washington Avenue, had yet to begin.<sup>12</sup> The 25th Street Elevated remains an indication of what the unbuilt Washington Avenue structure may have looked like. As of this writing, however, the 25th Street Elevated is in poor shape, with spalling concrete dropping onto cars below.<sup>13</sup>

### Notes

1. Howard W. Schotter, *The Growth and Development of the Pennsylvania Railroad Company: A Review of the Charter and Annual Reports of the Pennsylvania Railroad Company 1846 to 1926*, 2nd ed. (Philadelphia: Press of Allen, Lane, and Scott, 1927), 50.
2. On terminal consolidation in Chicago, see U.S. Department of the Interior, Historic American Engineering Record (HAER) No. IL-157, "St. Charles Air Line Bridge," 2001, Prints and Photographs Division, Library of Congress, Washington, D.C.
3. "\$24,000,000 South Philadelphia Railroad Improvement Now Well Under Way," *Engineering Record* 72, No. 11 (11 Sep. 1915): 327.

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4. *Agreement Between City of Philadelphia and the Philadelphia, Baltimore and Washington Railroad Company [et al.], dated 23rd March 1914, for the Abolition of Grade Crossings, South of Christian Street, and Between the Delaware and Schuylkill Rivers, Philadelphia*, in Box A-3054, Philadelphia Department of Public Works and Bureau of Surveys, South Philadelphia Track Elevation Records 1917-1929, Philadelphia City Archives, Philadelphia, Pa. [hereinafter cited as SPTE Records].
5. Minutes of meeting regarding 25th Street Line, 13 Oct. 1920, in folder "Operating Department, Supervisor for Regional Expenditures, South Philadelphia Track Elevation, Progress Reports," Box 20, Pennsylvania Railroad Records, Urban Archives, Paley Library, Temple University, Philadelphia, Pa. [hereinafter cited as PRR Records].
6. George S. Webster, Chief Engineer, to Joseph C. Wagner, Acting Director, Philadelphia Department of Public Works, 2 July 1920, in Box A-3148, SPTE Records.
7. Minutes of meeting regarding 25th Street Line, 12 May 1921, in folder "SPTE, Minutes of Meetings Dec. 1916 to Apr. 1932," Box 19; Assistant Engineer, to A. C. Shand, Chief Engineer, PRR, 24 Dec. 1920 and 23 July 1921, in folder "Operating Department, Supervisor for Regional Expenditures, South Philadelphia Track Elevation, Progress Reports," Box 20, PRR Records.
8. *Agreement Between City of Philadelphia and the Philadelphia, Baltimore and Washington Railroad Company [et al.], Supplemental to the Agreements of March 23, 1914, January 23, 1920, and April 6, 1923, for the Abolition of Grade Crossings in That Part of the City Lying South of Christian Street and between the Delaware and Schuylkill Rivers, as Authorized by Ordinance of December 20, 1924*, in Box A-3054, SPTE Records.
9. Assistant Engineer, to S. A. Sloan, Assistant to Chief Engineer, 28 Dec. 1926; Assistant Engineer, to E. B. Temple, Chief Engineer, Eastern Region, 23 Jan. 1929, in folder "Operating Department, Supervisor for Regional Expenditures, South Philadelphia Track Elevation, Progress Reports," Box 20, PRR Records.
10. Pennsylvania Railroad, "Phila. Term. Div., Delaware Extension, South Philadelphia Track Elevation, 25th St. Section — Contract No. 18, Ellsworth St. to Passayunk Ave., Details," dated 1926, in Box A-3054, SPTE Records.
11. R. Farnham, Jr., Assistant Engineer of Bridges & Buildings, to C. W. Thorn, Assistant Engineer, 19 Jul. 1916, in folder "Operating Department, Supervisor for Regional Expenditures, South Philadelphia Track Elevation, Progress Reports," Box 20, PRR Records.
12. Pennsylvania Railroad, Eastern Region, Office of the Chief Engineer, "South Philadelphia Track Improvements, Total Estimated Cost to Complete," map (14 Feb. 1935), in Box A-3054, SPTE Records.
13. Darin Gatti, Philadelphia Department of Streets, interview by author, Dec. 1999.

**Additional Source**

1. Milepost 4.68, region/division/branch 111143, aperture card files, Consolidated Rail Corp., Philadelphia, Pa. [transferred to Norfolk Southern Railway Co., Atlanta, Ga.].